Docket No. 61003 (70820)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT:	Y. Kii	CONF. NO.:	3397
U.S. SERIAL NO.:	10/797,743	EXAMINER:	J. Repko
FILED:	March 9, 2004	GROUP:	2628
FOR:	METHOD AND APPARATUS FOR HIGH-SPEED SHADOWING USING SHADOW VOLUMES		

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REMARKS: PRE-APPEAL BRIEF REQUEST FOR REVIEW

The following remarks support Applicant's "Pre-Appeal Brief Request for Review" filed herewith in the above-referenced application. These remarks constitute no more than five pages, and are being filed with a Notice of Appeal, thereby satisfying the requirements.

Claims 1, 3, 4, 6, and 9-11 were rejected under 35 USC 102(e) as being anticipated by U.S. Patent 6,744,430 to Shimizu (hereinafter "Shimizu"). Claims 2, 5, 7, and 8 were rejected over prior art including the Shimizu reference. These rejections are respectfully traversed.

Applicant respectfully requests review of the Final Office Action in the above-referenced application. No amendments are being filed with this request.

Applicant is filing the "Pre-Appeal Brief Request for Review" based on the following clear errors and/or omissions in the Final Office Action mailed on September 6, 2007.

First Clear Error and/or Omission in the Final Office Action:

The Examiner has made a first clear error and/or omission at least because the Shimizu reference does not teach or suggest a graphic processing apparatus or method including "obtaining a coordinate region that is positioned behind the front-facing shadow polygons and in front of the back-facing shadow polygons," as recited in independent claims 1, 4, and 9.

On page 4 of the Final Office Action of 09/06/2007, the following sections of Shimizu were cited allegedly for teaching the claimed "hidden surface removal and shadowing processing section": column 18, lines 49-51 and column 21, lines 25-27.

Column 18, lines 49-51 of Shimizu states: "The region buffers 220-1 and 220-n store information on whether something is inside or outside a volume (region), pixel by pixel."

Column 21, lines 25-27 of Shimizu states: "The sort preprocessor (Z buffer) 110 outputs the polygon ID positioned foremost for each pixel, layer by layer."

In other words, the above sections of Shimizu merely describe that the pixels of an object can be either "inside or outside" a given volume or region on a pixel-by-pixel basis, and the polygon ID "positioned foremost" is outputted for each pixel, layer by layer.

Therefore, the Shimizu reference does not teach or suggest an apparatus or method in which hidden surface removal and shadow processing are performed in order to obtain a coordinate region "positioned behind the front-facing shadow polygons and in front of the back-facing shadow polygons," as recited in independent claims 1, 4, and 9.

Second Clear Error and/or Omission in the Final Office Action:

The Examiner has made a second clear error and/or omission at least because the Examiner has improperly equated "layer by layer" processing in Shimizu with the Applicant's claimed coordinate region "positioned behind the front-facing shadow polygons and in front of the back-facing shadow polygons," as recited in independent claims 1, 4, and 9.

For example, on page 13, last paragraph to page 14, first paragraph of the Final Office Action, the Examiner indicated that the "layer by layer" processing of Shimizu corresponds to the Applicant's claimed coordinate region.

However, independent claims 1, 4, and 9 do not require "layer by layer" processing.

Moreover, the "layer by layer" approach to outputting polygon IDs, as disclosed in Shimizu, does not teach or suggest an apparatus or method in which hidden surface removal and shadow processing are performed in order to obtain a coordinate region "positioned behind the front-facing shadow polygons and in front of the back-facing shadow polygons," as recited in independent claims 1, 4, and 9.

Third Clear Error and/or Omission in the Final Office Action:

The Examiner has made a third clear error and/or omission at least because the Examiner has engaged in hindsight reasoning by reading one or more limitations of the Applicant's claimed invention into the Shimizu reference, and has not identified any teaching or suggestion of the Applicant's claimed coordinate region "positioned behind the front-facing shadow polygons and in front of the back-facing shadow polygons."

On page 14, last paragraph of the Office Action of 09/06/2007, the Examiner alleged that: "In the Shimizu reference, if a polygon is inside a volume, then it is behind the front facing shadow polygons and in front of the back facing shadow polygons relative to a viewpoint, and vice versa."

There is simply no teaching or suggestion in Shimizu to support the above allegation. In particular, the Shimizu reference does not separate polygons into "front facing shadow polygons" and "back facing shadow polygons" *as claimed.*

In Shimizu, column 21, lines 25-27 merely teaches that the polygon IDs positioned foremost are outputted for each pixel "layer by layer."

Applicant submits that all of the claims under final rejection are in condition for allowance and should be allowed, and that the Final Office Action should be withdrawn.

Respectfully submitted,

/Steven M. Jensen/

Date: December 6, 2007

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